

Customer No.: 31561
Application No.: 10/709,036
Docket No.: 12476-US-PA

To the Specification:

Please amend paragraph [0033] as following:

[0033] Referring to FIG. 3A, a copper layer, a nickel layer, a tin layer and a gold layer are sequentially formed on a silicon substrate 20 via evaporation process. For example, the copper layer, the nickle layer ~~and~~, the tin layer and the gold layer have thickness 4 μ m, 2 μ m, 3.2 μ m and 2.13 μ m respectively. The % weight ratio of gold to tin is about 20:80 having a variation range about 3~4%, wherein the ratio of gold to tin can be achieved by, for example, controlling the thickness of the gold layer and the tin layer. As shown in FIG. 3A, when the tin layer and the gold layer are treated at 280°C, the bond microstructure 22 will have a layered structure comprising an AuSn layer and an Au₅Sn layer. The copper layer 24 between the silicon substrate 20 and the layer structure 22 serves as the wetting layer for enhancing adhesion between the silicon substrate 10 and the bond microstructure 22. The nickel layer 26 between the copper layer 24 and the bond microstructure 22 serves as the barrier layer for preventing the downward diffusion of tin from the bond microstructure structure 22.